

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Chen Liang on 3/4/2010.

The application has been amended as follows:

1. (Currently Amended) A method of processing a microfeature workpiece, comprising:
 - supporting a microfeature workpiece by an unheated support in an interior of a processing chamber having a polymeric wall;
 - contacting a surface of the microfeature workpiece with an etchant liquid, the polymeric wall of the processing chamber being substantially non-reactive with the etchant liquid;
 - heating the etchant liquid by delivering radiation from a radiation source through the polymeric wall of the processing chamber to heat the etchant liquid, the polymeric wall being more transmissive of an operative wavelength range of the radiation than the etchant liquid, thereby a temperature of the etchant liquid is increased more rapidly than a temperature of the polymeric wall;
 - controlling the radiation source to maintain a temperature of the etchant liquid at or above a target process temperature to etch the surface of the microfeature workpiece;
 - and
 - removing the etched microfeature workpiece from the processing chamber, wherein etching the surface of the microfeature workpiece yields a resultant etchant, the

method further comprising determining at least one chemical property of the microfeature workpiece by chemically analyzing the resultant etchant.

2. (Original) The method of claim 1 further comprising adding the etchant liquid to the processing space at a first temperature that is below the target process temperature.
3. (Original) The method of claim 1 wherein the radiation is delivered substantially uniformly across the surface of the microfeature workpiece.
4. (Original) The method of claim 1 wherein the radiation comprises infrared radiation.
5. (Original) The method of claim 1 further comprising enclosing the microfeature workpiece within the interior of the processing chamber.
6. (Original) The method of claim 1 wherein a temperature of the wall of the processing chamber is no greater than the temperature of the etchant liquid when the etchant liquid is at or above the target process temperature.
7. (Original) The method of claim 6 wherein the processing chamber includes a base, a temperature of the base of the processing chamber being no greater than the temperature of the etchant liquid when the etchant liquid is at or above the target process temperature.
8. (Original) The method of claim 1 wherein the radiation is substantially the only heat source for heating the etchant liquid from a first temperature to the target process temperature, which is higher than the first temperature.
9. (Original) The method of claim 1 wherein an inner surface of the processing chamber comprises a fluoropolymer, further comprising contacting the inner surface of the processing chamber with the etchant liquid.

10-18. (Canceled)

19. (Currently Amended) A method of processing a microfeature workpiece, comprising:

supporting a microfeature workpiece with an unheated support in an interior of a processing chamber having a polymeric wall;
contacting a surface of the microfeature workpiece with a processing fluid;
delivering infrared radiation through the polymeric wall of the processing chamber to heat the processing fluid from a first temperature to a higher second temperature that promotes processing of the surface of the microfeature workpiece, the polymeric wall being more infrared transparent than the processing fluid, thereby the processing fluid is heated more rapidly than the polymeric wall; and
maintaining a temperature of the processing fluid at or above the second temperature for a process period to process the surface of the microfeature workpiece, a temperature of the wall of the processing chamber being no greater than the temperature of the processing fluid during the process period, wherein the processing fluid comprises an etchant liquid and processing the surface of the microfeature workpiece comprises etching the surface of the microfeature workpiece.

20. (Canceled)

21. (Original) The method of claim 19 wherein an inner surface of the processing chamber comprises a fluoropolymer and the processing fluid comprises an etchant liquid, further comprising contacting the inner surface of the processing chamber with the etchant liquid.

22. (Original) The method of claim 19 further comprising adding the processing fluid to the processing space at an introduction temperature that is below the second temperature.

23. (Original) The method of claim 19 further comprising adding the processing fluid to the processing space at the first temperature that is below the second temperature.

24. (Original) The method of claim 19 wherein the radiation is delivered substantially uniformly across the surface of the microfeature workpiece.

25. (Original) The method of claim 19 wherein the radiation comprises infrared radiation.

26. (Original) The method of claim 19 further comprising enclosing the microfeature workpiece within the interior of the processing chamber.

27. (Original) The method of claim 19 wherein the radiation is substantially the only heat source for heating the processing fluid from the first temperature to the second temperature.

28. (Currently Amended) ~~The method of claim 19~~ A method of processing a microfeature workpiece comprising:
supporting a microfeature workpiece with an unheated support in an interior of a processing chamber having a polymeric wall;
contacting a surface of the microfeature workpiece with a processing fluid;
delivering infrared radiation through the polymeric wall of the processing chamber to heat the processing fluid from a first temperature to a higher second temperature that promotes processing of the surface of the microfeature workpiece, the polymeric wall being more infrared transparent than the processing fluid, thereby the processing fluid is heated more rapidly than the polymeric wall; and
maintaining a temperature of the processing fluid at or above the second temperature for a process period to process the surface of the microfeature workpiece, a temperature of the wall of the processing chamber being no greater than the temperature of the processing fluid during the process period, wherein processing the surface of the microfeature workpiece yields a resultant fluid, the method further comprising determining at least one chemical property of the microfeature workpiece by chemically analyzing the resultant fluid.

29-56. (Canceled)

Allowable Subject Matter

2. Claims 1-9, 19, 21-28 are allowed.
3. The following is an examiner's statement of reasons for allowance: Claims 1, 19 and 28 are allowed in view of the Board of Patent Appeals and Interference decision issued on 9/2/2009.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MAHMOUD DAHIMENE whose telephone number is (571)272-2410. The examiner can normally be reached on week days from 8:00 AM. to 5:00 PM..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on (571) 272-1465. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. D./
Examiner, Art Unit 1792

/Nadine G Norton/
Supervisory Patent Examiner, Art Unit 1792